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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,178	11/25/2003	James Stephen Mason	GB920020058US1	7003
50548	7590	07/18/2006	EXAMINER	
ZILKA-KOTAB, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120				NGUYEN, HAI L
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/722,178	MASON, JAMES STEPHEN	
	Examiner Hai L. Nguyen	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 April 2006.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 4-7 is/are allowed.
- 6) Claim(s) 1,2,8-16,19 and 20 is/are rejected.
- 7) Claim(s) 3,17 and 18 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 04 January 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. The amendment received on 4/14/2006 has been reviewed and considered with the following results:

As to the prior art rejection to the claims, made in the previous Office Action mailed on 01/15/2006, Applicant's arguments have been carefully reviewed, but are not persuasive. Applicant's amendments necessitate new action on the merits appears below. The arguments supporting the previous rejections are addressed in detail below.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 8, 10, 12, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Arai et al. (US 6,320,470; previously cited).

With regard to claims 1 and 10, Arai et al. discloses in Fig. 1 a semiconductor phased locked loop filter, and a method of use thereof, having a passive capacitor part (16) and an active resistor part (17, 18); the active resistor part being integrated with the passive capacitor (see column 1, lines 1-12).

With regard to claims 2, 8, 12 and 20, the reference also meets the recited limitations in these claims.

With regard to claim 16, the active resistor part is controlled by a regulator circuit, wherein the regulator circuit comprises a current source (11, 13) and a voltage source (VP, VN).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 8-11, 13-15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (APA), Fig. 1 in the present application, in view of Nguyen et al. (US 6,437,639; previously cited).

With regard to claims 1 and 10, the admitted prior art in Fig. 1 shows a semiconductor Type Two phased locked loop filter, and a method of use thereof, having a passive capacitor part (C1, C2) and an resistor part (R1). Fig. 1 of the prior art meets all the claimed limitations except that the resistor part is a passive resistor instead of an active resistor as recited in the claim. Nguyen et al. (US 6,437,639) teaches in Figs. 6-7 a filter circuit having active resistor, which is integrated with the passive capacitor (C1, C2), as a variable resistance device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to utilize that teaching of Nguyen et al. in the filter circuit of the APA (Fig. 1 in the present application) by replacing the passive resistor of APA with the active resistor taught by Nguyen et al. for the advantage of being able to save space of the circuit. Since the active

semiconductor devices such as field effect transistors are utilized as the resistive elements of the filter, such an implementation utilizes very little area.

With regard to claims 2, 8 and 20, the references also meet the recited limitations in these claims (column 5, lines 1-62 of Nguyen et al.).

With regard to claim 11, the references (Nguyen et al.) also meet the recited limitation in the claim. Since there is no special step for manufacturing of resistor components is disclosed.

With regard to claims 13-15, the references (Fig. 1 of the APA) also meet the recited limitation in these claims.

With regard to claim 9, the admitted prior art in Fig. 1 shows a semiconductor phased locked loop system comprising a charge pump; a voltage controller oscillator; and a Type Two filter comprising a passive capacitor part (C1, C2) and a resistor part (R1). Fig. 1 of the APA meets all the claimed limitations except that the resistor part is a passive resistor instead of an active resistor as recited in the claim. Nguyen et al. teaches in Figs. 6-7 a filter circuit having active resistor, which is integrated with the passive capacitor (C1, C2), as a variable resistance device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to utilize that teaching of Nguyen et al. in the filter circuit of the APA (Fig. 1 in the present application) by replacing the passive resistor of APA with the active resistor taught by Nguyen et al. in order to save space. Since the active semiconductor devices such as field effect transistors are utilized as the resistive elements of the filter, such an implementation utilizes very little area of the integrated circuit for the same value of resistance.

With regard to claim 19, the references also meet the recited limitation in the claim (column 5, lines 1-62 of Nguyen et al.).

***Response to Arguments***

6. Applicant's first argument stating that "Arai does not disclose a Type Two phase locked loop filter, nor the constituent elements arranged like a Type Two phase locked loop filter. Therefore, Arai fails to teach a Type Two phased locked loop filter having the claimed components as arranged as required by the claims, i.e., as a Type Two phase locked loop filter". That argument is not persuasive because Fig. 1 of Arai having all of the elements arranged as recited by the claims. Since the rejections are solely based on the claimed limitations; Arai reference includes all of the structural limitations as per claims 1, 2, 8, 10, 12 and 16, thus Arai clearly anticipates the claims 1, 2, 8, 10, 12 and 16. Even though, Arai does not disclose the filter of Fig. 1 being as a Type Two phased locked loop filter, the Arai apparatus does not differentiate from the claimed apparatus, if the prior art teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat App. & Inter. 1987). Therefore, Arai clearly teach a Type Two phased locked loop filter.

7. Applicant's second argument stating "neither APA nor Nguyen suggests that an active resistor part would provide any benefit, thus it cannot be said that either reference adequately suggests the proposed modification of APA with Nguyen's transistor". That argument is not persuasive because Nguyen clearly teaches the benefit of using the transistors (aka active resistor) to implement the resistors, note the above discussion. Therefore, the rejections of record are still believed to be proper and are therefore maintained as set forth above.

***Allowable Subject Matter***

8. Claims 4-7 are allowed.

9. Claims 3, 17, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose or fairly suggest a semiconductor Type Two phased locked loop filter, as recited in claim 4, having specific structural limitations such as a regulator circuit (U1, U2, T2, Iref), wherein the Type Two phased locked loop filter operates from a voltage (From Charge Pump/ To VCO) and the active resistor part (T1) is controlled by a regulator circuit operating from a voltage (Vref) that follows the type two phased locked loop voltage, and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

Claims 3, 17, and 18 are allowed for similar reasons; note the above discussion with regard to claim 4.

### *Conclusion*

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

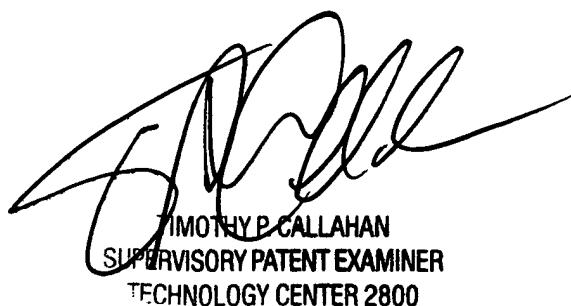
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN  
July 05, 2006



Handwritten signature of Timothy P. Callahan, followed by his title and name:  
TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800